From: Olson, Bryan

Sent: Wednesday, February 27, 2019 8:27 AM

To: Cianciarulo, Robert; Taylor, Melissa; Hull, Richard; Sherman, RuthAnn; Barmakian, Nancy; Dumville, Kelsey

Subject: RE: here we go again?

It is like nothing has happened over the last two yeasr. It's unbelievable. Mike W is still not helping the situation either.

From: Cianciarulo, Robert

Sent: Wednesday, February 27, 2019 7:58 AM

To: Taylor, Melissa <Taylor.Melissag@epa.gov>; Hull, Richard <Hull.Richard@epa.gov>; Sherman, RuthAnn <sherman.ruthann@epa.gov>; Olson, Bryan

<Olson.Bryan@epa.gov>; Barmakian, Nancy <Barmakian.Nancy@epa.gov>; Dumville, Kelsey <Dumville.Kelsey@epa.gov>

Subject: here we go again?

Is this another one of these bills or is this paper picking up a year-old story?

https://www.newburyportnews.com/news/regional_news/bill-forces-nh-to-clean-up-landfill/article_eeccc8d0-e027-5f02-9ea3-4d004adaeed9.html

From: Dumville, Kelsey

Sent: Monday, February 04, 2019 3:58 PM **To:** Olson, Bryan; Szaro, Deb; Gutro, Doug

Cc: Lindsay, Jane

Subject: RE: Seacoast Cancer Commission appointment

Thank you!

Kelsey Dumville Public Affairs Office

Senior Community Involvement Coordinator

Office: 617-918-1003 Cell: 857-998-0226

From: Olson, Bryan

Sent: Monday, February 04, 2019 3:53 PM **To:** Dumville, Kelsey < Dumville.Kelsey@epa.gov>

Subject: FW: Seacoast Cancer Commission appointment

I am also OK with this. Thank you, Bryan

From: Szaro, Deb

Sent: Monday, February 04, 2019 3:08 PM

To: Dumville, Kelsey < Dumville.Kelsey@epa.gov>; Olson, Bryan < Olson.Bryan@epa.gov>

Cc: Gutro, Doug <<u>Gutro.Doug@epa.gov</u>>; Lindsay, Jane <<u>lindsay.jane@epa.gov</u>>

Subject: RE: Seacoast Cancer Commission appointment

I edited it a little.

Jane, please put on letterhead, get my signature, and mail.

Thanks...Deb

From: Dumville, Kelsey

Sent: Monday, February 04, 2019 12:49 PM

To: Szaro, Deb <<u>Szaro.Deb@epa.gov</u>>; Olson, Bryan <<u>Olson.Bryan@epa.gov</u>>

Cc: Gutro, Doug < <u>Gutro.Doug@epa.gov</u>>

Subject: FW: Seacoast Cancer Commission appointment

Hi Deb and Bryan,

Per your discussion with Doug this morning, attached is a copy of a draft letter to the NH House Clerk regarding my participation on the Legislative Commission on the Seacoast Cancer Cluster Investigation. Also attached is the 2017 letter signed by Deb suggesting Jim would be the most appropriate EPA person to sit on the Commission. Let me know if you have any questions or comments.

Thanks, Kelsey

Kelsey Dumville
Public Affairs Office
Senior Community Involvement Coordinator

Office: 617-918-1003 Cell: 857-998-0226

From: Dumville, Kelsey

Sent: Friday, February 01, 2019 3:21 PM **To:** Gutro, Doug < Gutro.Doug@epa.gov>

Subject: Seacoast Cancer Commission appointment

Hi Doug,

I reached out to the chair and other key members of the Cancer Cluster Commission this week to let remind them that I will be taking over for Jim as the EPA representative. When Jim was appointed to the Commission, we were required to send a letter to the House Clerk regarding his participation. I was asked to have a similar letter sent to the Clerk regarding my participation. Attached is a draft letter that I would like Deb to sign for me to send to the Clerk. If is an updated version of the letter she sent on Jim behalf in 2017 (also attached). I am not sure that we need to keep the language in the last couple of paragraphs but wanted to run it by you to see what you thought. If you could take a look and let me know if you have any comments before I send it over to Deb, that would be great.

Thanks! Kelsey

Kelsey Dumville Public Affairs Office Senior Community Involvement Coordinator Office: 617-918-1003 Cell: 857-998-0226

From: Olson, Bryan

Sent: Monday, February 04, 2019 3:53 PM

To: Dumville, Kelsey

Subject: FW: Seacoast Cancer Commission appointment

Attachments: seacoast cancer cluster appt Kelsey.docx

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Sent: Monday, February 04, 2019 3:08 PM

To: Dumville, Kelsey < Dumville.Kelsey@epa.gov>; Olson, Bryan < Olson.Bryan@epa.gov>

Cc: Gutro, Doug <Gutro.Doug@epa.gov>; Lindsay, Jane lindsay.jane@epa.gov>

Subject: RE: Seacoast Cancer Commission appointment

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Cc: Gutro, Doug < Gutro.Doug@epa.gov >

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Thanks, Kelsey Kelsey Dumville Public Affairs Office Senior Community Involvement Coordinator

Office: 617-918-1003 Cell: 857-998-0226

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Kelsey Dumville
Public Affairs Office
Senior Community Involvement Coordinator

Office: 617-918-1003 Cell: 857-998-0226

From: Dumville, Kelsey

Sent: Monday, February 04, 2019 12:49 PM

To: Szaro, Deb; Olson, Bryan

Cc: Gutro, Doug

Subject: FW: Seacoast Cancer Commission appointment

Attachments: seacoast cancer cluster appt Kelsey.docx; seacoast cancer cluster appt jm.docx

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Public Affairs Office
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Office: 617-918-1003 Cell: 857-998-0226

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Thanks!

Kelsey

Kelsey Dumville Public Affairs Office Senior Community Involvement Coordinator Office: 617-918-1003 Cell: 857-998-0226

From: Olson, Bryan

Sent: Tuesday, January 29, 2019 11:26 AM **To:** Dumville, Kelsey; Gutro, Doug; Szaro, Deb

Subject: RE: Seacoast Online Article

Maybe we should set up a time to brief him on these sites and other issues surrounding Great Bay. We could do them as separate meetings or together; either way is fine with me. Bryan

From: Dumville, Kelsey

Sent: Tuesday, January 29, 2019 11:06 AM

To: Gutro, Doug <Gutro.Doug@epa.gov>; Olson, Bryan <Olson.Bryan@epa.gov>; Szaro, Deb <Szaro.Deb@epa.gov>

Subject: Fwd: Seacoast Online Article

FYI on the new Congressman in New Hampshire.

Kelsey Dumville
Public Affairs Office

Senior Community Involvement Coordinator

Office: <u>617-918-1003</u> Cell: <u>857-998-0226</u>

Begin forwarded message:

From: "Dumville, Kelsey" < Dumville.Kelsey@epa.gov>

Date: January 29, 2019 at 8:57:04 AM EST

To: "Murphy, Jim" < "Mull, Richard" < "Hull, Richard@epa.gov">"Hull, Richard@epa.gov">"Hull, Richard@epa.gov">"Hull, Richard@epa.gov">"Taylor, Melissa"

<<u>Taylor.Melissag@epa.gov</u>>
Subject: Seacoast Online Article

https://www.seacoastonline.com/news/20190125/pappas-gets-up-to-speed-on-pfas-contamination

PORTSMOUTH -- When Congressman Chris Pappas, D-NH, met with four women working hard to address PFAS contamination in the Seacoast and across the country, he promised to what he could do help in their fight.

Pappas met with Andrea Amico and Alayna Davis, co-founders of Testing for Pease, former state representative Mindi Messmer and Lindsey Carmichael of the New Hampshire Safe Water Alliance at Popovers in Portsmouth.

Pappas recently signed on to a new bipartisan task force on PFAS, formed in the House by Reps. Dan Kildee, D-Mich, and Brian Fitzpatrick, R-PA, to address the drinking water contamination attributed to toxic flourinated chemicals known as PFAS. With the federal government shutdown there has not been any real action yet from the task force, but Pappas said he hopes that changes soon and he pledged to work with the women.

"We want to help, to raise your voices and make sure you are heard," said Pappas. "I want to support policy at the federal level that can help change the way we look at this contamination, and find the legislative paths that can assist."

The Testing for Pease group has been working with ATSDR (Agency for Toxic Substances and Disease Registry) to research the contamination. A meeting at Pease, scheduled for Feb. 7 has been postponed, possibly due to the government shutdown, said the group members.

On Friday, a deal had been reached to reopen the government for three weeks while the Democrats and Republicans negotiated a possible settlement to keep it open.

PFAS are man-made chemicals that were used in a number of ways, including non-stick cookware, water repellant clothing, carpets and firefighting foam. The testing for Pease group said their PFAS contamination stems from firefighting foam. The issue, whatever the cause, is nationwide, even global and Amico said they are working to mobilize and work with like-minded groups across the country to bring more pressure to the federal and state governments and get definitive action on the problem.

"It has been five years since we formed our group," Amico told Pappas. "We want to bring you up to speed on where we are and how you can help."

Amico spoke about how she became involved. Her husband was working in a company located on the Pease Tradeport, and her two young children attended day care there also.

"When I heard about the contamination of, and the closing of a well at Pease, I became concerned for my family," said Amico. "There were hundreds of children in day care. The state did testing and our blood levels came back elevated for the chemicals. We don't know what that means for our children down the road. All we can do is monitor their health. The chemicals stay in your body a long, long time. Our kids are healthy now, but who knows what is down the road. We need to find out."

The women told Pappas they want to see PFAS classified as a family of compounds, which should make testing and research move quicker. They also want to see federal funding allocated for research and to help families impacted by PFAS, with a focus on the most sensitive populations, babies, children and nursing mothers.

Pappas asked if there might be families impacted who are not aware of the risks. Absolutely, said the women.

"Most physicians are not educated about PFAS," said Davis. "My son was exposed. I have to bring specific guidelines to our doctor, have to ask him to test for this."

Messmer said the Seacoast has a cancer cluster, primarily among children. She said there are 661 military bases across the country, and that doesn't even take into account industrial manufacturers where PFAS contamination exists.

Carmichael said the estimates are that at least one-third of the nation's water supplies are impacted by PFAS.

Kelsey Dumville Public Affairs Office Senior Community Involvement Coordinator

Office: 617-918-1003 Cell: 857-998-0226

From: Dumville, Kelsey

Sent: Tuesday, January 29, 2019 11:06 AM **To:** Gutro, Doug; Olson, Bryan; Szaro, Deb

Subject: Fwd: Seacoast Online Article

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Public Affairs Office
Senior Community Involvement Coordinator

Office: <u>617-918-1003</u> Cell: <u>857-998-0226</u>

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Date: January 29, 2019 at 8:57:04 AM EST

To: "Murphy, Jim" < "Mull, Richard" < "Hull, Richard@epa.gov">"Hull, Richard@epa.gov">"Hul

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Kelsey Dumville Public Affairs Office Senior Community Involvement Coordinator Office: 617-918-1003

Cell: 857-998-0226

From: Olson, Bryan

Sent: Thursday, November 15, 2018 12:51 PM

To: Hull, Richard

Cc: Murphy, Jim; Dumville, Kelsey; Cianciarulo, Robert; Taylor, Melissa

Subject: RE: Coakley Update -10/4/18

Thank you Skip. For number 2, was there any noteworthy preliminary results from the sampling in the boreholes? Bryan

From: Hull, Richard

Sent: Thursday, November 15, 2018 12:42 PM **To:** Olson, Bryan <Olson.Bryan@epa.gov>

Cc: Murphy, Jim <Murphy.Jim@epa.gov>; Dumville, Kelsey <Dumville.Kelsey@epa.gov>; Cianciarulo, Robert <Cianciarulo.Bob@epa.gov>; Taylor, Melissa

<Taylor.Melissag@epa.gov>

Subject: RE: Coakley Update -10/4/18

Bryan, detailed below is my bi-weekly update for Coakley.

Updated November 15, 2018

- 1. Treatment systems have been installed by the CLG at the two wells, 368 Breakfast Hill Road residence and Breakfast Hill Golf Club, that had recently exceeded the new AGQS for 1,4 dioxane. The systems are operating and have been approved by DES. DES is requiring that the CLG expand the GMZ to incorporate these two properties.
- 2. Samples from packer testing of newly installed bedrock boreholes have been analyzed for PFAS, 1,4 dioxane and VOCs, and preliminary data has been provided. Final data is anticipated to be submitted next week. The CLG continues to pursue access to 7 historic boreholes for surveying and sampling and has gained verbal agreement to access 3 of the wells.
- 3. Wet weather storm water runoff samples were collected from landfill cover retention basins and discharge culverts, underdrain discharge locations and landfill seep locations on October 27. These samples were collected in accordance with a work plan that CLG prepared and EPA reviewed and approved, to further investigate the extent of PFAS contamination associated with landfill cover material. Samples are being analyzed and results will be provided once the data is reported by the lab. Additional sampling at these locations will be conducted in the spring.

4. Representatives from USGS visited the site on October 24 to become more familiar with site features and to discuss the scope of work for developing a localized flow model. Based on the findings of this visit, the USGS prepared a revised scope of work which has been reviewed by EPA an interagency agreement for the development of this flow model is being finalized. Development of this model is scheduled to take about 6-9 months.

Let me know if you have any questions on this.

Skip

Richard W. Hull, Project Manager

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882

From: Hull, Richard

Sent: Thursday, November 01, 2018 1:49 PM **To:** Olson, Bryan < Olson.Bryan@epa.gov>

Cc: Murphy, Jim < Murphy. Jim@epa.gov >; Dumville, Kelsey < Dumville. Kelsey@epa.gov >; Cianciarulo, Robert < Cianciarulo. Bob@epa.gov >; Taylor, Melissa

<<u>Taylor.Melissag@epa.gov</u>>

Subject: RE: Coakley Update -10/4/18

Hi Bryan,

Bi-weekly update for Coakley.

Updated November 1, 2018

- 1. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs has been completed and preliminary data (not validated) has been provided. Boreholes were sampled and analyzed for VOCs, PFAS and 1,4 dioxane. The CLG continues to pursue access to 7 historic boreholes for surveying and sampling. Some of these boreholes are located to the east and south of the landfill.
- 2. The CLG and NHDES collected samples from two wells (one residential at 368 Breakfast Hill Road, golf course clubhouse) that had previously had 1,4 dioxane levels above the now promulgated state standard of 0.32 ppb. The state directed the CLG to take these samples (DES collected split samples) after adoption of the new standard. The DES samples were above 0.32 ppb (0.38 ppb residential well, 0.61 ppb golf course clubhouse). October 5, DES sent the CLG a letter directing it to provide bottled water for the residential well owners and develop a plan for corrective action within 30 days. DES is

preparing a similar letter for the golf course clubhouse well (results just received) for issuance today. The golf course clubhouse well is actually a regulated "transient non-community" system. The CLG sample results are undergoing data validation and have not yet been made available.

- 3. Mark Gearreald, attorney for the Town of Hampton, provided a statement from Tom Ballestero to the Commission at its meeting on October 10. A response was provided to Mark Gearreald and the commission prior to its meeting on October 24.
- 4. Wet weather storm water runoff samples were collected from landfill cover retention basins and discharge culverts, underdrain discharge locations and landfill seep locations on October 27. These samples were collected in accordance with a work plan that CLG prepared and EPA reviewed and approved, to further investigate the extent of PFAS contamination associated with landfill cover material.
- 5. Representatives from USGS visited the site on October 24 to become more familiar with site features and to discuss the scope of work for developing a localized flow model. A revised scope of work has been submitted based on this site visit and EPA comments. Upon review and approval, EPA will enter in to an interagency agreement for the development of this flow model.
- 6. Bob Sullivan, attorney for the City of Portsmouth and former chair of the CLG board, resigned his position from the board. A replacement has not yet been named.

Let me know if you have any questions.

Skip

Richard W. Hull, Project Manager

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882

From: Hull, Richard

Sent: Thursday, October 18, 2018 5:34 PM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov; Taylor, Melissa < Taylor.Melissag@epa.gov; Olson, Bryan < Olson, Bryan <a href="mailto:Olson.Bryan@

Cc: Murphy, Jim < Murphy.Jim@epa.gov">Murphy.Jim@epa.gov>; Dumville, Kelsey < Dumville.Kelsey@epa.gov>

Subject: RE: Coakley Update -10/4/18

Hi Bryan,

Bi-weekly update for Coakley Landfill. Not mush to update relative to ongoing investigation work, except that it is ongoing. There are a couple of things that came out of the leg. comm. meeting last week as well as some new information related to the DES enforcing its new 1,4 dioxane standard.

Updated October 18, 2018

- 1. The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results have been provided to the residents. Of the 20 original requests, 14 wells were sampled (3 previously sampled by NHDES, 2 residents moved, 1 sampled on their own). Summary of results:
 - 7 of 14 were ND for PFAS
 - PFOA detected in 7 wells
 - PFOS, PFBS and PFHxS also detected
 - No results either individually or collectively were above 70 ppt
 - One PFBS result at 14 ppt; otherwise all results below 6 ppt
- 2. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs has been completed but results are not yet available. Boreholes were sampled and analyzed for VOCs, PFAS and 1,4 dioxane. The CLG continues to pursue access to 7 historic boreholes for surveying and sampling. Some of these boreholes are located to the east and south of the landfill.
- 3. The CLG and NHDES collected samples from two wells (one residential at 368 Breakfast Hill Road, golf course clubhouse) that had previously had 1,4 dioxane levels above the now promulgated state standard of 0.32 ppb. The state directed the CLG to take these samples (DES collected split samples) after adoption of the new standard. The DES sample was above 0.32 ppb (0.38 ppb) and so on October 5, DES sent the CLG a letter directing it to provide bottled water and develop a plan for corrective action within 30 days. The CLG results have not yet been made available.
- 4. Mark Gearreald, attorney for the Town of Hampton, provided a statement from Tom Ballestero (attached) to the Commission at its meeting on October 10. In the two-page statement, Mr. Ballestero reiterates some of his prior assertions and interpretations related to flow and contaminant transport at the landfill and asks for a "more urgent response at the Coakley Landfill". Mr. Ballestero also asserts that none of his suggestions have been implemented and that errors in the conceptual model that he has pointed out have "been largely ignored." Worth noting is that Mr. Ballestero does state that "radial flow continued up until the landfill was capped" and that "landfill capping most likely affected groundwater flow at the landfill..." which is something he has not acknowledged in the past. Jim Murphy committed to a response to this statement for the next commission meeting.

Let me know if you have any questions.

Skip

Richard W. Hull, Project Manager USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 <u>Hull.Richard@epa.gov</u> (617) 918-1882

From: Hull, Richard

Sent: Thursday, October 04, 2018 11:28 AM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov; Taylor, Melissa < Taylor.Melissag@epa.gov; Olson, Bryan < Olson, Bryan < Olson.Bryan@epa.gov

Cc: Murphy, Jim < <u>Murphy.Jim@epa.gov</u>>; Dumville, Kelsey < <u>Dumville.Kelsey@epa.gov</u>>

Subject: RE: Coakley Update -10/4/18

Hi Bryan,

Bi-weekly update for Coakley Landfill. I've also include this information in an update to the Legislative Commission, along with responses to a couple of specific questions from the last meeting. The Commission is meeting again next week.

Let me know if you have any questions.

Skip

Updated October 4, 2018

- 1. Note this summary of residential sampling is amended from the Sept. 24 update: The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results have been provided to the residents. Of the 20 original requests, 14 wells were sampled (3 previously sampled by NHDES, 2 residents moved, 1 sampled on their own). Summary of results:
 - 7 of 14 were ND for PFAS
 - PFOA detected in 7 wells
 - PFOS, PFBS and PFHxS also detected
 - No results either individually or collectively were above 70 ppt
 - One PFBS result at 14 ppt; otherwise all results below 6 ppt
- 2. The results of fish tissue sampling and analysis were reported to EPA on September 4. Fish were collected from five different locations in Berrys Brook ranging from about 1 mile to about 5 miles from the landfill. Of the six PFAS analyzed, PFOA, PFOS and PFNA were detected. PFOS was detected in all samples from the five locations and had the highest concentrations of the substances detected. Some results were above the risk-based screening level of 5.21 ng/g (based on HQ=0.1). EPA risk assessor reviewed and determined that exceedance of the screening level indicates only that further risk assessment is appropriate, but not that risks are acceptable or unacceptable. Further risk assessment was performed and involved calculation of the HQs for individual PFAS and the Hazard Index (HI), which is the sum of the individual HQs. EPA's risk limit is an HQ of 1 and a HI of 1. The sum of the HQs of multiple PFAS (the HI) was less than 1, and risk assessor tentatively concluded that the risk of recreational fish consumption in Berrys Brook is lower than EPA's risk limit of HI =1. EPA is conducting a data validation review for this fish tissue data and report. A statement of these results was developed and distributed to Jim Murphy's Coakley contact group (you may have seen the NHPR piece.)

- 3. On August 14, CLG submitted results of sampling of stormwater collected from the landfill cap retention pond discharge and subsurface collection system. CES, consultant for CLG, concluded that the data was showing that materials used to construct the cap may be contributing PFAS to stormwater runoff, which discharges to Berrys Brook. EPA prepared and issued a response on August 17, asking for additional sampling and investigation of cap construction to be performed. CLG submitted a draft work plan on September 10, and EPA conditionally approved the work plan on September 26. Investigation activities will include further sampling of stormwater and subsurface collection system discharges and the assessment of cap and retention pond construction and materials.
- 4. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs has begun and will be completed in the next couple of weeks, with analytical results to follow (based on laboratory reporting). The CLG is also pursuing access to 7 historic boreholes for surveying and sampling, some of which are located to the east and south of the landfill.

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882

From: Hull, Richard

Sent: Monday, September 24, 2018 11:53 AM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov; Taylor, Melissa < Taylor.Melissag@epa.gov; Olson, Bryan < Olson, Bryan < Olson.Bryan@epa.gov

Subject: Coakley Update - 9/24/18

Hi Bryan. Bi-weekly update for Coakley including results in from sampling of the 20 additional residential wells that were identified in response to the citizens petition.

Updated September 24, 2018

- 1. The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results have been provided to the residents. Of the 20 original requests, 12 wells were sampled (3 previously sampled by NHDES, 2 residents moved, 1 sampled on their own, 2 did not respond to schedule sampling). Summary of results:
 - 6 of 12 were ND for PFAS
 - PFOA detected in 6 wells
 - PFOS. PFBS and PFHxS also detected
 - No results either individually or collectively were above 70 ppt
 - One PFBS result at 14 ppt; otherwise all results below 6 ppt

- 2. The results of fish tissue sampling and analysis were reported to EPA on September 4. Fish were collected from five different locations in Berrys Brook ranging from about 1 mile to about 5 miles from the landfill. Of the six PFAS analyzed, PFOA, PFOS and PFNA were detected. PFOS was detected in all samples from the five locations and had the highest concentrations of the substances detected. Some results were above the risk-based screening level of 5.21 ng/g (based on HQ=0.1). EPA risk assessor reviewed and determined that exceedance of the screening level indicates only that further risk assessment is appropriate, but not that risks are acceptable or unacceptable. Further risk assessment was performed and involved calculation of the HQs for individual PFAS and the Hazard Index (HI), which is the sum of the individual HQs. EPA's risk limit is an HQ of 1 and a HI of 1. The sum of the HQs of multiple PFAS (the HI) was less than 1, and risk assessor tentatively concluded that the risk of recreational fish consumption in Berrys Brook is lower than EPA's risk limit of HI =1. EPA is conducting a data validation review for this fish tissue data and report. The risk assessor's interpretation explained here has not been provided to the public or the press. OSRR is coordinating with Jim and Kelsey to provide this information to the public and the media.
- 3. On August 14, CLG submitted results of sampling of stormwater collected from the landfill cap retention pond discharge and subsurface collection system. CES, consultant for CLG, concluded that the data was showing that materials used to construct the cap may be contributing PFAS to stormwater runoff, which discharges to Berrys Brook. EPA prepared and issued a response on August 17, asking for additional sampling and investigation of cap construction to be performed. CLG submitted a draft work plan on September 10. EPA and NHDES are currently reviewing and developing a conditional approval for the work plan.
- 4. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs will begin on September 25.
- 5. EPA is working with USGS and NHDES to develop a scope of work for a site-specific model for groundwater flow in bedrock.

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882

From: Hull, Richard

Sent: Thursday, September 06, 2018 4:47 PM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov; Taylor, Melissa < Taylor.Melissag@epa.gov; Olson, Bryan < Olson, Bryan <a href="mailto:Olson.Bryan@ep

Subject: RE: Coakley Update - 8/8/18

Hi Bryan. Bi-weekly update for Coakley, most notably the fish tissue info. I would stress that OEME is conducting a data verification review for the fish tissue data report and that we have not provided the risk interpretation included below to the public or press.

Updated September 6, 2018

1. The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results from some of the initial wells sampled have been provided. PFAS were not detected in four of the first ten wells sampled.

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Subject: RE: Coakley Update - 8/8/18

Hi Bryan. Sorry I'm just getting to this now, but here is an update on the Coakely issues we provided on August 8.

Updated August 23, 2018

1. The NHDES MtBE bureau began sampling of additional residential wells in Greenland, North Hampton and Rye this week.

2. EPA and NHDES met with Kim McNamara on August 23, along with a consultant for the City of Portsmouth (b) (5)

Kim will present to Bob Sullivan for the CLG to consider.

- 3. Fish tissue samples are being processed and results are expected in a few weeks.
- 4. On August 14, CLG submitted results of sampling of stormwater collected from the landfill cap retention pond discharge and subsurface collection system. CES, consultant for CLG, concluded that the data was showing that materials used to construct the cap may be contributing PFAS to stormwater runoff, which discharges to Berrys Brook. EPA prepared and issued a response on August 17, asking for additional sampling and investigation of cap construction to be performed. EPA asked for a workplan to be submitted in 15 days.

Sorry again for this being late. Let me know if you have any questions, although I am off tomorrow but back on Monday.

Skip

Richard W. Hull, Project Manager

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882

From: Hull, Richard

Sent: Wednesday, August 08, 2018 1:19 PM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov>; Taylor, Melissa < Taylor.Melissag@epa.gov>; Olson, Bryan < Olson, Bryan Olson

Subject: RE: Coakley Update - 8/8/18

I just heard from the PRP's consultant that the results from the analysis of fish tissue samples will be provided by the end of August.

Richard W. Hull, Project Manager

USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882 From: Cianciarulo, Robert

Sent: Wednesday, August 08, 2018 12:39 PM

To: Hull, Richard < Hull.Richard@epa.gov; Taylor, Melissa < Taylor, Melissag@epa.gov; Olson, Bryan < Olson, Bryan <a href="mailto:Olson.Bryan@e

Subject: RE: Coakley Update - 8/8/18

Bryan – see below. If Skip gets any more on the fish in time for your meeting this afternoon, he can update it, otherwise we'll do it in a subsequent update.

Our proposal is to have Skip do an update like this for you every two weeks so you have it for Alex and your HQ check-ins.

From: Hull, Richard

Sent: Wednesday, August 08, 2018 12:34 PM

To: Taylor, Melissa <Taylor.Melissag@epa.gov>; Cianciarulo, Robert <Cianciarulo.Bob@epa.gov>

Subject: Coakley Update - 8/8/18

Here's the revised update. I ran in to Bryan and he was looking for this for a meeting with Alex this afternoon. I tried to get more details on fish sample analysis and results, but haven't heard back from PRPs who are checking with lab.

Updated August 8, 2018

An June 4, 2018, the Regional Administrator met with Jillian Lane of Greenland Safe Water Action, and other members of the community who live near the Coakley Landfill. At that meeting, Jillian presented the RA with a petition signed by 135 concerned citizens that requested action be taken to address issues related to PFAS contamination at the Coakley Landfill and the local community. On July 3, 2018, the RA responded to that petition with action items addressing the issues outlined in the petition. Below is an update of the actions being taken to address those, and other issues:

- 1. Issue: The petition outlined concerns related to residential wells that are impacted by PFAS contamination and asked for access to a safe water supply and expanded residential well sampling.
 - Status: To date, all residential wells sampled remain below the HA of 70 ppt for PFOA and PFOS. On August 6, EPA mailed letters to 20 residents in Greenland, North Hampton and Rye offering sampling of tap water and analysis for PFAS. These residents had previously requested sampling, including a number that requested sampling during the June 4 community meeting with Alex Dunn. Beginning a few days after the mailing, the NHDES MtBE bureau will begin contacting the residents to schedule sampling. Samples will be shipped to OEME for analysis of PFAS.
- 2. Issue: EPA committed to working with the USGS to better define the local hydrogeology and flow patterns to better characterize the potential for the flow of PFAS contamination to local residents.

Status: OSRTI has provided funding to the region for this task and OSRR has initiated an Interagency Agreement with USGS to develop a model to evaluate site-specific hydrogeologic flow conditions at and around Coakley Landfill. USGS submitted a draft work plan and budget estimate, and OSRR has provided comments. Depending on the USGS internal review process, the IA will be finalized and work will begin by the start of FY19.

3. Issue: The petition asked that EPA compel the CLG to install effective remediation to address PFAS contamination.

Status: EPA and NHDES met with the City of Portsmouth's health officer, Kim McNamara, to discuss voluntary measures that the City and/or CLG can undertake to alleviate the impacts to residents near Coakley Landfill. Kim had reached out to both EPA and NHDES looking for suggestions. Suggested measures include providing point-of-use water supply filtration systems, extending a municipal water supply line, expand residential well sampling, and maintenance and treatment of impacted surface water. Kim will convene a meeting in mid-August to discuss these issues in more detail.

- 4. Other Issues: Bedrock investigation continues with installation of three deep-bedrock wells and the completion of geophysical surveying the week of July 30. Geophysics data will be used to identify water-bearing fractures for sampling beginning in August. Existing bedrock wells have been inventoried and geophysics and sampling will also be performed on those wells determined to be viable.
- 5. Other Issues: Fish samples have been collected from Berrys Brook and have been processed and analyzed. EPA is awaiting analytical results which will be submitted following the laboratory data validation and review process.
- 6. Other Issues: CLG is developing a work plan for assessing impacts of the discharge of runoff from the surface of the landfill cap to surface water receptors to identify potential PFAS contributions that may exist beyond landfill leachate. This work plan will be submitted Sept.-Oct.

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5 Post Office Square, Suite 100
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Boston, MA 02109-3912
Hull.Richard@epa.gov

(617) 918-1882

From: Olson, Bryan

Sent: Monday, October 22, 2018 12:58 PM

To: Hull, Richard

Cc: Cianciarulo, Robert; Taylor, Melissa; Murphy, Jim; Dumville, Kelsey

Subject: Re: Coakley Update -10/4/18

Thank you for this Skip. (b) (5)

Bryan

Sent from my iPhone

On Oct 18, 2018, at 5:34 PM, Hull, Richard < Hull.Richard@epa.gov> wrote:

Hi Bryan,

Bi-weekly update for Coakley Landfill. Not mush to update relative to ongoing investigation work, except that it is ongoing. There are a couple of things that came out of the leg. comm. meeting last week as well as some new information related to the DES enforcing its new 1,4 dioxane standard.

Updated October 18, 2018

- 1. The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results have been provided to the residents. Of the 20 original requests, 14 wells were sampled (3 previously sampled by NHDES, 2 residents moved, 1 sampled on their own). Summary of results:
 - 7 of 14 were ND for PFAS
 - PFOA detected in 7 wells
 - PFOS, PFBS and PFHxS also detected
 - No results either individually or collectively were above 70 ppt
 - One PFBS result at 14 ppt; otherwise all results below 6 ppt
- 2. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs has been completed but results are not yet available. Boreholes were sampled and analyzed for VOCs, PFAS and 1,4 dioxane. The CLG continues to pursue access to 7 historic boreholes for surveying and sampling. Some of these boreholes are located to the east and south of the landfill.
- 3. The CLG and NHDES collected samples from two wells (one residential at 368 Breakfast Hill Road, golf course clubhouse) that had previously had 1,4 dioxane levels above the now promulgated state standard of 0.32 ppb. The state directed the CLG to take these samples (DES collected split samples) after adoption of the new standard. The DES sample was above 0.32 ppb (0.38 ppb) and so on

- October 5, DES sent the CLG a letter directing it to provide bottled water and develop a plan for corrective action within 30 days. The CLG results have not yet been made available.
- 4. Mark Gearreald, attorney for the Town of Hampton, provided a statement from Tom Ballestero (attached) to the Commission at its meeting on October 10. In the two-page statement, Mr. Ballestero reiterates some of his prior assertions and interpretations related to flow and contaminant transport at the landfill and asks for a "more urgent response at the Coakley Landfill". Mr. Ballestero also asserts that none of his suggestions have been implemented and that errors in the conceptual model that he has pointed out have "been largely ignored." Worth noting is that Mr. Ballestero does state that "radial flow continued up until the landfill was capped" and that "landfill capping most likely affected groundwater flow at the landfill..." which is something he has not acknowledged in the past. Jim Murphy committed to a response to this statement for the next commission meeting.

Let me know if you have any questions.

Skip

Richard W. Hull, Project Manager USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov

(617) 918-1882

From: Hull, Richard

Sent: Thursday, October 04, 2018 11:28 AM

To: Cianciarulo, Robert < Cianciarulo.Bob@epa.gov">Cianciarulo.Bob@epa.gov; Taylor, Melissa < Taylor.Melissag@epa.gov); Olson, Bryan < Olson.Bryan@epa.gov)

Cc: Murphy, Jim < Murphy, Jim Murphy, Jim Murphy, Jim@epa.gov>; Dumville, Kelsey Dumville.Kelsey@epa.gov>

Subject: RE: Coakley Update -10/4/18

Hi Bryan,

Bi-weekly update for Coakley Landfill. I've also include this information in an update to the Legislative Commission, along with responses to a couple of specific questions from the last meeting. The Commission is meeting again next week.

Let me know if you have any questions.

Skip

Updated October 4, 2018

- 1. Note this summary of residential sampling is amended from the Sept. 24 update: The NHDES MtBE bureau completed sampling of additional residential wells in Greenland, North Hampton and Rye. Samples were submitted to, and analyzed by OEME and results have been provided to the residents. Of the 20 original requests, 14 wells were sampled (3 previously sampled by NHDES, 2 residents moved, 1 sampled on their own). Summary of results:
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- 3. On August 14, CLG submitted results of sampling of stormwater collected from the landfill cap retention pond discharge and subsurface collection system. CES, consultant for CLG, concluded that the data was showing that materials used to construct the cap may be contributing PFAS to stormwater runoff, which discharges to Berrys Brook. EPA prepared and issued a response on August 17, asking for additional sampling and investigation of cap construction to be performed. CLG submitted a draft work plan on September 10, and EPA conditionally approved the work plan on September 26. Investigation activities will include further sampling of stormwater and subsurface collection system discharges and the assessment of cap and retention pond construction and materials.
- 4. EPA and NHDES reviewed and approved proposed fracture zones for packer sampling from 3 new bedrock boreholes. Packer sampling for PFAS, 1,4 dioxane and VOCs has begun and will be completed in the next couple of weeks, with analytical results to follow (based on laboratory reporting). The CLG is also pursuing access to 7 historic boreholes for surveying and sampling, some of which are located to the east and south of the landfill.

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 - Status: To date, all residential wells sampled remain below the HA of 70 ppt for PFOA and PFOS. On August 6, EPA mailed letters to 20 residents in Greenland, North Hampton and Rye offering sampling of tap water and analysis for PFAS. These residents had previously requested sampling, including a number that requested sampling during the June 4 community meeting with Alex Dunn. Beginning a few days after the mailing, the NHDES MtBE bureau will begin contacting the residents to schedule sampling. Samples will be shipped to OEME for analysis of PFAS.
- 2. Issue: EPA committed to working with the USGS to better define the local hydrogeology and flow patterns to better characterize the potential for the flow of PFAS contamination to local residents.
 - Status: OSRTI has provided funding to the region for this task and OSRR has initiated an Interagency Agreement with USGS to develop a model to evaluate site-specific hydrogeologic flow conditions at and around Coakley Landfill. USGS submitted a draft work plan and budget estimate, and OSRR has provided comments. Depending on the USGS internal review process, the IA will be finalized and work will begin by the start of FY19.
- 3. Issue: The petition asked that EPA compel the CLG to install effective remediation to address PFAS contamination.

 Status: EPA and NHDES met with the City of Portsmouth's health officer, Kim McNamara, to discuss voluntary measures that the City and/or CLG can undertake to alleviate the impacts to residents near Coakley Landfill. Kim had reached out to both EPA and NHDES looking for suggestions. Suggested measures include providing point-of-use water supply filtration systems, extending a municipal water supply line, expand residential well sampling, and maintenance and treatment of impacted surface water. Kim will convene a meeting in mid-August to discuss these issues in more detail.
- 4. Other Issues: Bedrock investigation continues with installation of three deep-bedrock wells and the completion of geophysical surveying the week of July 30. Geophysics data will be used to identify water-bearing fractures for sampling beginning in August. Existing bedrock wells have been inventoried and geophysics and sampling will also be performed on those wells determined to be viable.
- 5. Other Issues: Fish samples have been collected from Berrys Brook and have been processed and analyzed. EPA is awaiting analytical results which will be submitted following the laboratory data validation and review process.
- 6. Other Issues: CLG is developing a work plan for assessing impacts of the discharge of runoff from the surface of the landfill cap to surface water receptors to identify potential PFAS contributions that may exist beyond landfill leachate. This work plan will be submitted Sept.-Oct.

Richard W. Hull, Project Manager USEPA New England, Region 1 5 Post Office Square, Suite 100 OSRR07-1 Boston, MA 02109-3912 Hull.Richard@epa.gov (617) 918-1882 <image2018-10-11-095733.pdf>

From: Olson, Bryan

Sent: Tuesday, August 14, 2018 3:20 PM

To: Taylor, Melissa; Murphy, Jim; Hull, Richard; Cianciarulo, Robert

Cc: Dumville, Kelsey

Subject: RE: NHPR story on Coakley

At the end of the radio interview, it says there will be part 2 "tomorrow".

From: Taylor, Melissa

Sent: Tuesday, August 14, 2018 3:09 PM

To: Murphy, Jim <Murphy.Jim@epa.gov>; Olson, Bryan <Olson.Bryan@epa.gov>; Hull, Richard <Hull.Richard@epa.gov>; Cianciarulo, Robert

<Cianciarulo.Bob@epa.gov>

Cc: Dumville, Kelsey < Dumville. Kelsey@epa.gov>

Subject: RE: NHPR story on Coakley

I don't believe anyone has been interviewed for this story. It's interesting that the majority of the article is pro-resident until the last sentence. Is there any reason to believe there is a second segment to this story?

From: Murphy, Jim

Sent: Tuesday, August 14, 2018 2:08 PM

To: Olson, Bryan < Olson. Bryan@epa.gov >; Hull, Richard < Hull.Richard@epa.gov >; Taylor, Melissa < Taylor.Melissag@epa.gov >; Cianciarulo, Robert

<Cianciarulo.Bob@epa.gov>

Cc: Dumville, Kelsey < <u>Dumville.Kelsey@epa.gov</u>>

Subject: RE: NHPR story on Coakley

I think the last time anyone saw Annie was at the PFAS conference, other than the Shaheen visit to Pease where Annie did not mention Coakley other than asking if there was work currently in progress. I told her that HQ was working on the items mentioned at the conference and that the region was working the bedrock study with the state & CLG.

Jim Murphy

Team Leader, Government Relations & Community Involvement Office of the Regional Administrator / Public Affairs U.S. Environmental Protection Agency, Region 1 – New England 5 Post Office Square, Mail Code ORA01-1 Boston. MA 02109

Phone: 617-918-1028 Cell: 617-721-2868 murphy.jim@epa.gov

From: Olson, Bryan

Sent: Tuesday, August 14, 2018 2:04 PM

To: Hull, Richard < Hull, Richard@epa.gov; Taylor, Melissa < Taylor, Melissag@epa.gov; Cianciarulo, Robert < Cianciarulo.Bob@epa.gov>

Cc: Murphy, Jim <Murphy.Jim@epa.gov>; Dumville, Kelsey <Dumville.Kelsey@epa.gov>

Subject: RE: NHPR story on Coakley

It sounds like part 2 may be rougher. Have we been interviewed? Bryan

From: Hull, Richard

Sent: Tuesday, August 14, 2018 10:52 AM

To: Taylor, Melissa <Taylor.Melissag@epa.gov>; Cianciarulo, Robert <Cianciarulo.Bob@epa.gov>; Olson, Bryan <Olson.Bryan@epa.gov>

Cc: Murphy, Jim < Murphy. Jim@epa.gov>; Dumville, Kelsey < Dumville. Kelsey@epa.gov>

Subject: FW: NHPR story on Coakley

FYI – pretty comprehensive story

Richard W. Hull, Project Manager

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From: Hoffman, Andrew [mailto:Andrew.Hoffman@des.nh.gov]

Sent: Tuesday, August 14, 2018 10:30 AM

To: Hull, Richard < Hull, Richard@epa.gov>; Murphy, Jim < Murphy.Jim@epa.gov>

Subject: NHPR story on Coakley

http://www.nhpr.org/post/coakley-landfill-site-government-assurances-meet-public-fear#stream/0

Andrew Hoffman, P.E.

New Hampshire Department of Environmental Services
Waste Management Division
Hazardous Waste Remediation Bureau

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